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ABSTRACT

The document summarizes the Vocational Training and Placement of the Severely Handicapped Project (VOTAP), a project designed to determine: (1) potential vocations for severely handicapped youth and adults; (2) what vocational training programs are available for the severely handicapped; (3) whether effective job placement programs exist; and (4) what research and development activities might contribute to improved career/vocational education opportunities. Sections address VOTAP components which involve development of an annotated bibliography and a national survey of programs, identification of vocational opportunities, description of training programs and placement services, recommendations of research and development activities, and project dissemination and impact. (SBH)

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Vocational Training and Placement of the Severely Handicapped

SUMMARY REPORT

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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OBJECTIVES AND SCOPE OF THE PROJECT

In the last decade, much progress has been made in preparing and training the handicapped for gainful employment. Supported by the Vocational Education Amendments of 1968 and 1976, a number of innovative and high-quality vocational programs for the handicapped are now operating in local school districts and other agencies.

Although progress is being made with those classified as handicapped, more attention needs to be focused on the severely handicapped. The goal of this project was to investigate and assess the vocational training and employment possibilities of persons with severe permanent handicaps in order to provide a realistic basis for such programs, to identify services currently available, and to stimulate further research and development.

In July 1975, the Bureau of Education for the Handicapped (BEH) of the U.S. Office of Education contracted with the American Institutes for Research to investigate and assess the vocational training and employment possibilities of persons with severe permanent handicaps. The AIR project is called Vocational Training and Placement of the Severely Handicapped (VOTAP). Specifically, the objectives of this project were to determine (1) potential vocations for severely handicapped youth and adults; (2) what vocational training programs are available for the severely handicapped; (3) whether effective job placement programs exist; and (4) what research and development activities might contribute to improved career/vocational education opportunities for the severely handicapped. The project convened a National Advisory Panel consisting of representatives of special education, vocational education, and rehabilitation. This panel provided policy orientation and technical direction to the project.

Early in the VOTAP project it became desirable to clarify that the emphasis of the project would be on vocational or occupational education rather than career education even though the BEH objective cited above implied that career education aspects should be considered. Vocational education and training were conceived of as education or training related to the occupational development of the severely handicapped, age 14 and above. This definition went beyond "vocational education" in the narrow sense of the term, which implies skills training with a trade orientation.

Although the programs to be studied by VOTAP were for students 14 years and older, it was apparent that severely handicapped persons are especially in need of occupational preparation before age 14, when prevocational training usually begins. For this reason, it was decided to include recommendations that may extend research and development

activities into the grade school and preschool years, but no attempt was made to deal with career education concerns in a comprehensive manner.

ANNOTATED BIBLIOGRAPHY AND NATIONAL SURVEY OF PROGRAMS

The compilation of an annotated bibliography was the first major task of the VOTAP project. A search and review of career and vocational training literature from the past ten years was conducted to provide the information for the bibliography as well as to provide background information for other project activities. Items were searched for under the following categories:

- Research reports concerning techniques for training persons with various handicaps in specific job skills;
- Studies of job requirements and job adaptations for the handicapped;
- Reports on training programs and placement services that involve innovative and/or demonstrably effective techniques. A minimum client age of 14 was imposed for the programs reviewed, but no maximum age was established.

The focus of the project on vocational training as opposed to career awareness proved to be an important discriminator in reviewing the documents. The BEH definition of "severely handicapped"* also served as a useful discriminator. Much of the literature was directed toward the educable mentally retarded or the learning disabled, neither of whom is considered severely handicapped by that definition.

The annotated bibliography that was then compiled contains annotations of 128 articles and 15 books. The annotations are divided into five categories:

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*BEH has defined severely handicapped persons as those who are seriously emotionally disturbed, profoundly or severely mentally retarded, or multiply handicapped (two or more handicapping conditions). Also in the category of severely handicapped are persons with severe language deprivations, perceptual-cognitive deprivations, a fragile physiological condition, and/or a number of abnormal behaviors. These abnormal behaviors may include a failure to attend to pronounced social stimuli, self-mutilation, durable and intense temper tantrums, or the absence of rudimentary verbal control.

- Features of Rehabilitation
- Employment Opportunities, Progress, and Recommendations
- Sheltered Workshops: General Considerations
- Jobs and Skills Training
- Vocational Training and Placement Programs

Since the bibliography will be useful to professional and lay personnel who desire to read broadly in this area, it has been placed in the ERIC (Educational Resources Information Center) system as a public service.

A survey of programs serving the vocational education and placement needs of the severely handicapped was the second major project task. Three separate survey instruments were developed.

The first instrument was the Training and Placement Program Nomination Form, developed for the purpose of securing nominations of innovative or effective training and placement services. Respondents were knowledgeable persons in five groups: experts and university researchers; federal agencies and bureaus, regional educational laboratories, and research and development laboratories; knowledgeable persons in state departments of education; superintendents of local education agencies in cities of over 100,000; and professional organizations. This form was mailed to 1,043 potential respondents; 213 (20%) were completed and returned. From these nominations, 373 programs were identified.

The second instrument that was developed for the survey was the Program Information Form. This form requested descriptive information about a training program's services, clientele, staff, costs, training procedures, community involvement, evaluation procedures, placement services, and innovations. It also requested information about jobs clients were holding.

The third instrument was the Job Placement Information Form. This form contained questions regarding a program's clients, staff, referral sources, placement procedures, community involvement, evaluation procedures, needs, and innovations. It also contained questions about jobs into which severely handicapped persons had been placed.

A total of 300 Program Information Forms and 254 Job Placement Information Forms were ultimately sent to 333 programs chosen from each of the ten USOE geographical regions; the number of programs surveyed in each region was in proportion to the region's population. Within each

region, programs were selected to include urban, rural, private, and public programs; programs with large, medium, and small numbers of clients; and programs serving a broad range of severe handicaps. Two hundred fifty-one (54%) of the total number of survey forms were returned, providing information on 169 (51%) of the programs.

DETERMINING VOCATIONAL OPPORTUNITIES

After identification of jobs held by severely handicapped persons from the literature review and the survey, attention was given to selection of an overall conceptual schema for describing potential areas, skills, vocations, and jobs for the employment of the severely handicapped. It was originally anticipated that the 15 career clusters developed by the USOE would be used in organizing potential employment areas for the severely handicapped. However, in determining the occupations within each cluster suitable for handicapped individuals, it became apparent that a different model would be more useful. Since the focus of the handbook was to be on identifying potential jobs, it was necessary to concentrate on the skills, interests, and abilities of the individual handicapped person. The 15 career clusters developed by USOE focus on economic centers in the United States and are used largely for the purpose of predicting groupings that are likely to occur in the labor market. From several potential models that emphasize individual competencies, the Dictionary of Occupational Titles (DOT) was chosen as the overall conceptual schema on the basis of its high level of development and its widespread use.

Once jobs being held by handicapped persons were identified, the DOT, which clusters jobs according to the skills needed to perform them, was used to identify jobs requiring similar skills, thus allowing extrapolation to "new" jobs and job areas. This clustering scheme encompassed a wide range of jobs and minimized the possibility of overlooking potential occupational areas. Occupations were grouped according to the worker trait groups of the DOT and clustered according to the level of sophistication required by jobs in dealing with data, people, and things.

This job classification information is contained in the VOTAP handbook, Vocational Opportunities, which also describes major barriers confronted by the severely handicapped person who attempts to obtain vocational training and eventual job placement. The handbook also describes strategies for surmounting these barriers. These strategies may be used by the individual worker, by training and placement institutions, or by other advocates seeking to help the handicapped person attain his or her occupational goals. The handbook will be useful in two ways.

- designing programs to train people in skills relevant to a wide range of jobs or in background skills that will transfer to a wide range of more specific training programs; and

- identifying job clusters that may be open for development to persons with certain types of handicaps.

Job data obtained from the survey described above could not be organized to include all potential jobs available for a particular handicapping condition. With the exception of the severely and profoundly mentally retarded, it was found that severely handicapped persons of various categories of handicapping conditions are holding jobs in competitive employment across a wide range of worker-trait groups instead of just a few worker-trait groups. Therefore, the handbook was organized to focus more on the individual's skills than on the category of his or her handicapping condition. Each worker-trait group in which a severely handicapped person is now holding a job was analyzed to determine how other jobs within that group could be opened to severely handicapped workers by managing the barriers hindering job training or placement.

DESCRIBING TRAINING PROGRAMS AND PLACEMENT SERVICES

A second handbook, Training Programs and Placement Services, presents 152 summary descriptions of vocational training programs and placement services for severely handicapped individuals in the United States. Its purpose is to provide professionals involved in the vocational training and placement of the severely handicapped with a resource directory of national scope. It is an intermediate link between the person seeking information about training and placement services and the agency supplying those services. Its usefulness will depend on the need of the professional to go beyond his or her immediate resources in search of ideas, programs, models, and information. The descriptions provided are summaries only, supplying basic information and highlighting successful and/or innovative practices. For detailed information, the user is encouraged to get in touch with the specific agency.

The programs and services described in the handbook represent a variety of agencies concerned with helping the handicapped achieve vocational independence. These agencies include both public and private secondary and postsecondary educational institutions and rehabilitation facilities. Summary information for each program is arranged within the following categories:

- Program description, size, and clients served
- Certification, accreditation, and licensing
- Staff and management
- Major features
- Facilities, materials, and equipment

- Assessment
- Cost
- Successful and/or innovative aspects
- Needs
- For further information

The handbook contains three appendices. Appendix A, presented in matrix form, is a listing of all agencies or programs described in the handbook, indicating both the type of agency (e.g., secondary educational institution, sheltered workshop, comprehensive rehabilitation center) and the handicapped groups receiving services. Appendix B, also in matrix form, is a listing of all agencies and the types of services they provide. Appendix C lists the criteria for innovative and/or effective program practices. These criteria were drafted by the AIR research staff and reviewed by BEH and the project advisory panel. They were used as general guidelines when screening individual program practices in terms of effectiveness and/or innovation. The criteria are useful in suggesting the features of an "ideal" program; this does not imply, however, that any one program should have all of these features or practices to be considered successful or innovative.

RECOMMENDED RESEARCH AND DEVELOPMENT ACTIVITIES

The final project product is a monograph, Research and Development Recommendations, describing activities needed to improve vocational training and to meet the placement and occupational needs of severely handicapped persons. While the recommendations were developed for the Bureau of Education for the Handicapped, they will also be useful to others engaged in research for this population.

The purpose of the monograph is to identify and conceptualize problem areas in vocational education for the severely handicapped which will require special attention by research and development specialists during the years ahead. A system was developed to conceptualize the problems by categorizing them so that long-range systematic plans can be made. These are macroproblem areas, rather than specific needs, each of which could become a whole program of research over time.

The monograph approaches the task of generating research and development recommendations from two points of view. Chapter 1 presents a theoretical model that describes the dimensions upon which the task could be approached independently of recommendations from practitioners in the field. Three guidelines were used in developing the research and development plan.

- The recommendations should describe a balanced program of investment, addressing fundamental issues from a wide range of topic areas related to vocational training and placement of the handicapped as well as the immediate and pressing needs of practitioners.

- The plan should be heuristic, generating research ideas from a variety of approaches.

- The plan should have a theoretical as well as empirical approach to problem analysis to ensure comprehensiveness as well as orientation to real problems.

The theoretical model (Figure 1) shows the dimensions (Areas of Enterprise, Target Groups, and Activities) that provide the structure for categorizing recommendations. A monograph chapter is devoted to each Area of Enterprise; a "slice" of the theoretical model showing target groups X activities presents the cell location for each recommendation in the chapter (see Figure 2).

The recommendations in the monograph address four areas of enterprise:

(1) Educational programming includes developing appropriate curricula, instructional methods, and staff skills, organizing programming at the community level, smoothing the transition to the world of work, and helping handicapped individuals formulate goals and obtain training for career preparation.

(2) Occupational independence includes helping the handicapped individual obtain placement on the job and maintain progress once a job and career have been started. This area also includes developing staff to help in establishing occupational independence, to perform job reengineering, and to maintain social work programs.

(3) Socioemotional adjustment is an area that encompasses a number of research and development needs. These include the development of basic social skills, attitudes of self-acceptance and self-esteem, accurate self-perception, realistic aspirations, the ability to utilize healthy assistance from others, and skills in gaining societal acceptance.

(4) Physical accommodation includes the design, provision, and maintenance of prostheses, braces, and other assistive devices, as well as increasing the accessibility of housing, work places, and transportation systems.

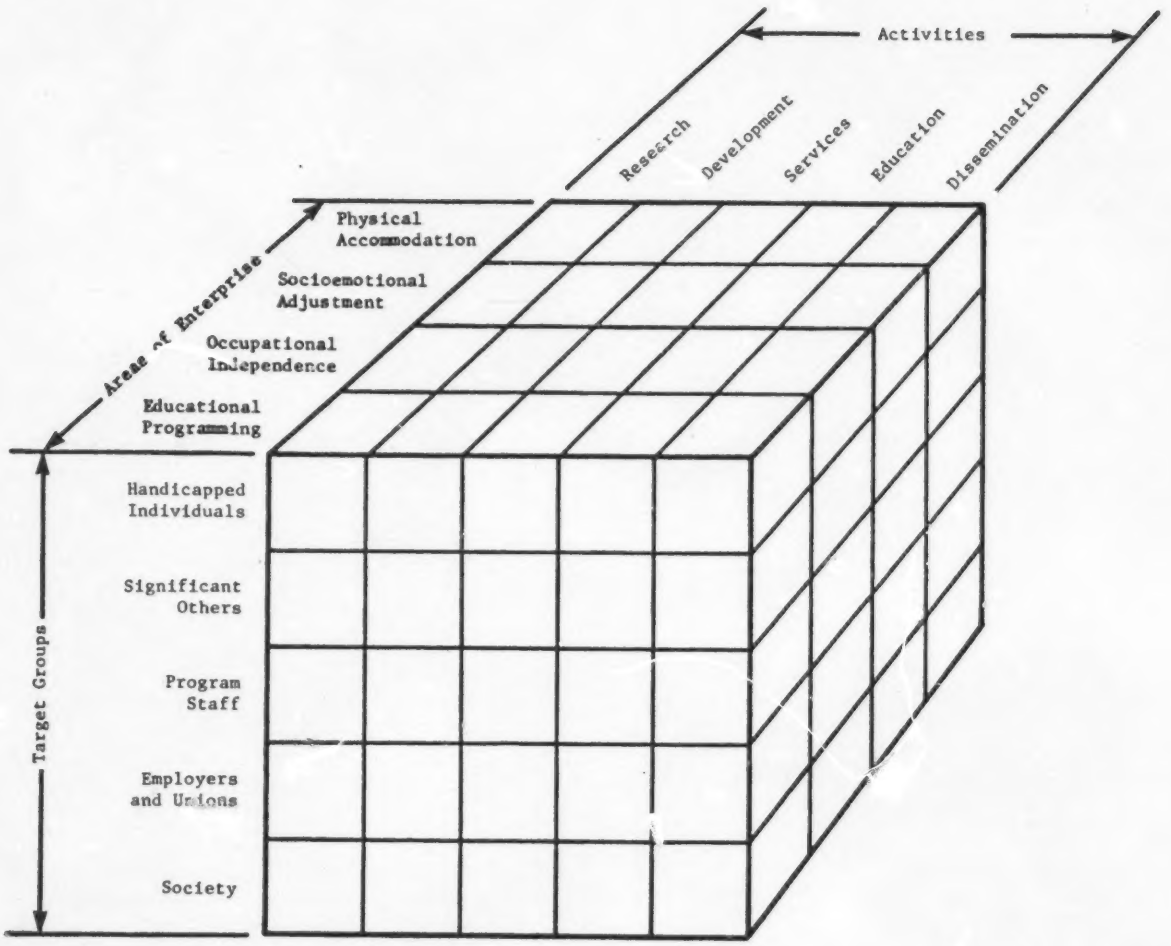

Figure 1. Theoretical dimensions for research and development recommendations.

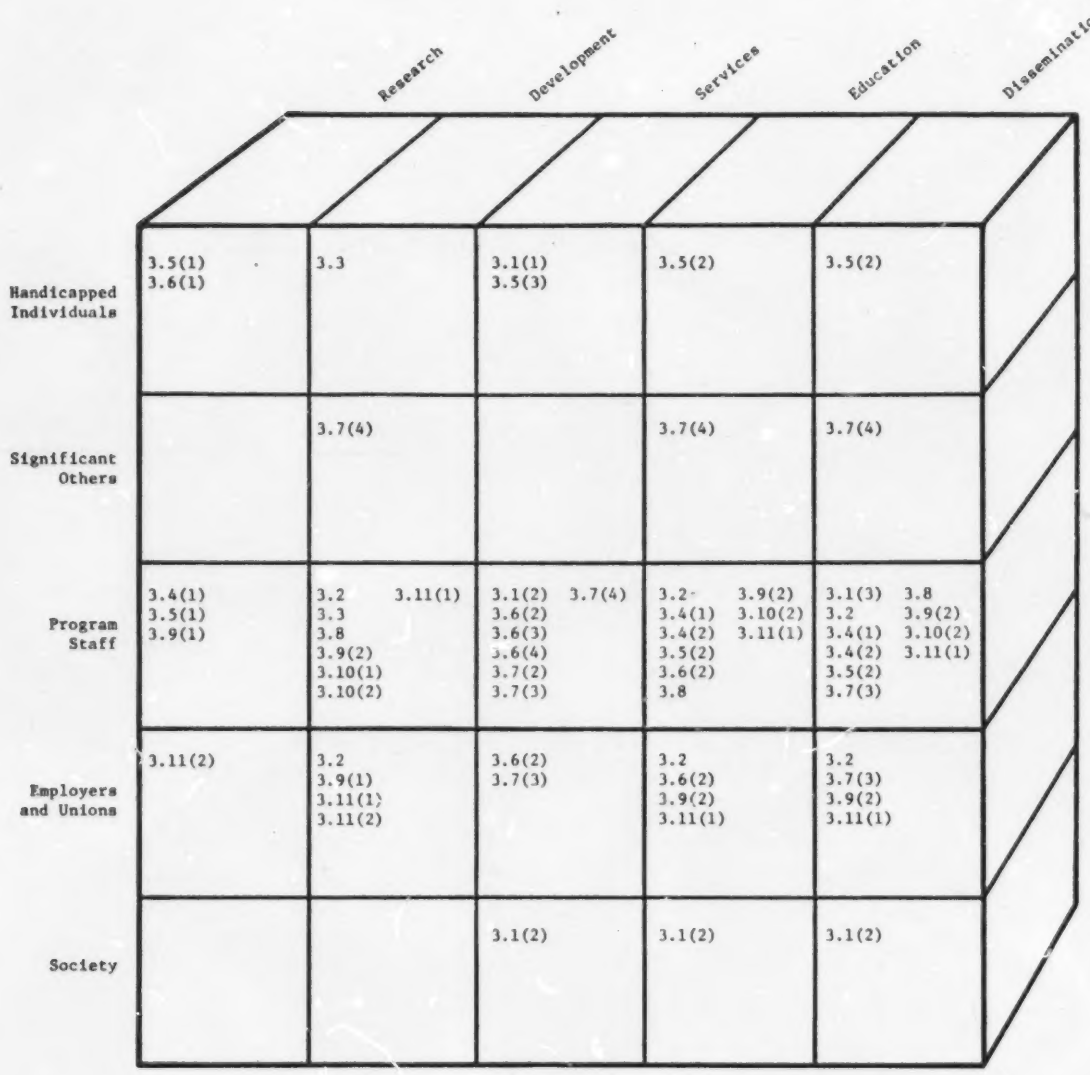

Figure 2. Categorization of recommendations for Educational Programming. [Note that the numbers in each cell represent specific recommendations presented in the monograph chapter; e.g., 3.5 is a major topic in Chapter 3--Increasing Prevocational Experience and Work Adjustment Skills in Order to Help Handicapped Persons Succeed in Employment. The number in parentheses (1) indicates that this is the first recommendation within the major topic.]

The second dimension of the theoretical model is target groups:

(1) Handicapped individuals is the first target group.

(2) Significant others is the second target group. Persons in this group generally include family, friends, employers, and professionals who work with the handicapped.

(3) Staff conducting a program of services to the handicapped is the third target group to which research should be directed. This group includes persons working in public and private institutions, programs, or consortia designed to habilitate or rehabilitate the handicapped, or to provide vocational training, job placement, or employment. Sheltered employment is considered a part of this area.

(4) Employers and unions is the fourth target group, which includes persons in business, industry, professions, and labor unions who control jobs in competitive employment.

(5) Society is the last target group. It constitutes the system within which the other groups must operate.

In the monograph, research and development activities are divided into five component areas:

(1) Basic and Developmental Research. Basic research is primarily concerned with the discovery of knowledge, while developmental research is undertaken to bring about improvements in specific practices in a particular setting.

(2) Product and Materials Development. This category focuses on the development of appropriate products or materials useful in programming. Such materials may include curriculum materials for student use, teacher guides, and audiovisual teaching aids and devices.

(3) Services. Often the solution to a problem facing the vocational training or occupational placement and maintenance of a handicapped person in a job does not require basic or developmental research or materials development but requires development of basic services. These activities include the development of evaluation devices to determine educational and vocational needs, the development of programming services in new situations that have been demonstrated to be effective in other settings, or the placement of handicapped personnel on the job and assistance in maintaining and enhancing their occupational careers.

(4) Evaluation. Evaluation might be on an individual needs basis to assess capabilities, training needs, occupational readiness, or performance on the job. It might be on a program basis to clarify desired outcomes and to determine the effectiveness of certain inputs and processes undertaken to meet program outcomes or evaluate program impact. Evaluation might be on a large-scale basis to determine needs in the areas of research, development, or program services.

(5) Dissemination. This is the process of transmitting information about an idea, program, or product that creates awareness or interest in the idea, program, or product. This information enables potential users to implement a practice on a trial basis. Dissemination is an appropriate strategy when a problem exists and tested solutions to the problem have already been researched and developed. If the solutions are effective, then the task is one of implementing that solution in a new setting. Examples of dissemination activities are the establishment of dissemination centers; the establishment of central records systems that serve as a clearinghouse for new ideas, programs, or products; the development and distribution of program information packages (PIPs); and technical assistance in conducting workshops and providing consulting services to enable practices to be established in new settings.

Following the theoretical model presented in Chapter 1, Chapter 2 describes the needs and recommendations of program staff as determined by the VOTAP survey and by members of the project advisory panel. The recommendations that follow in the remaining chapters were developed using both approaches. Recommended activities in each chapter are arranged by major topics; a specific example is included for most recommendations. Recommendations are identified at the conclusion of each chapter as representing immediate, interim, or long-term efforts for BEH.

The last chapter summarizes the recommendations and suggests three areas for special emphasis. The first area is the need to make impact on the controllers of the job market. The second concerns the development of technical resources to enable the severely and profoundly handicapped to obtain training and employment. The third area for emphasis is the need to demonstrate effective practices and to disseminate information about these practices as widely as possible.

(1) Impact on Controllers of the Job Market. Three problems in this area require immediate attention. The first is changing public attitudes toward the severely handicapped. Public attitudes are now stereotypic and discriminatory. A second immediate concern is the involvement of business, labor, and industrial personnel in

programming for the severely handicapped. This is seen as essential to the establishment of relevant training and as the main vehicle by which handicapped personnel can be placed in competitive jobs. The third problem is the need for coordination of community resources. Programs serving the severely handicapped are not working as effectively as they would if community resources were coordinated into interagency systems with delineated supportive roles.

(2) Technical Resources. This high priority research and development area refers to the need for technical breakthroughs to help severely handicapped persons prepare for the job market. Within this category are two basic areas of concern. First, continued research needs to be directed toward the development of improved instructional techniques. More effective and efficient instructional methods are needed to prepare the handicapped for work. Testing and evaluation procedures also need to be improved. Second, attention should be given to adapting jobs in competitive employment to the needs of the severely handicapped. Job redesign, environmental redesign, and keeping up with technological improvements in assistive devices are high priority concerns.

(3) Demonstration and Dissemination of Effective Practices. Another pressing need is for effective programming practices to be developed or identified and then evaluated for effectiveness. Once procedures have passed rigorous evaluation criteria, they need to be effectively packaged and disseminated utilizing the most modern and efficient methods available.

PROJECT DISSEMINATION AND IMPACT

Initial dissemination started with the onset of project activities. From the beginning, attention was given to maximizing the likelihood of project impact. For example, a conscious effort was made to involve a wide variety of practitioners in the overall planning and design of the project. Those persons represented the vocational education, special education, and rehabilitation communities. Further, every opportunity was taken to make the project known within the profession. Eight formal symposia or colloquia and/or materials displays were held at various conventions of professional associations. A project newsletter was mailed periodically to a readership of approximately 2,000 persons interested in vocational training and placement of the severely handicapped. The survey conducted by project staff created awareness of and interest in the project among administrators and practitioners in all states. The annotated bibliography was placed in the Educational Resources Information Center (ERIC) system; a resume of the bibliography appeared in Resources in Education (RIE), ERIC's monthly abstract publication.

The handbook, Vocational Opportunities, should be useful both to program personnel and to handicapped persons and their parents or guardians for career planning purposes. Consequently, a commercial publisher will be sought to provide the outlet for dissemination of this product. An outlet will also be sought with commercial publishers for the second handbook, Training Programs and Placement Services. This product should be of wide interest to personnel developing programming for the severely handicapped and thus has potential for widespread dissemination.

The monograph, Research and Development Recommendations, should be useful to professional researchers in the field of the severely handicapped and should be made available to them. The recommendations are not likely to have commercial value for a publisher; more promising avenues for dissemination are the Council for Exceptional Children (CEC), the BEH Area Learning Resource Center's Specialized Office for the Severely Handicapped, or the BEH publication program. CEC may be an especially receptive audience in view of the recent establishment of its Career Education Division.

In order for the project to have impact, it is essential that its products be widely available to the professional public and that the public be made aware of their availability. Because the materials (particularly the descriptive program information in the second handbook) will become outdated rapidly, product impact will also be contingent upon the speed of dissemination.

The handbooks and monograph, particularly as a set, provide a comprehensive description of much of the current programming being provided for severely handicapped persons in the nation. Readers will be able to assess the major needs of the handicapped and major strategies being used to meet those needs. These materials have clarified the current emphases in research and programming and will help to determine the best directions for future efforts.

In conclusion, it is believed that this project has already had impact throughout the nation as a result of professional presentations, the project newsletter, and the survey. Wide dissemination of the products should help realize the objectives of significantly improving vocational education programs for the severely handicapped and increasing opportunities for independence and self-development.